

Digital File Transfer Guidelines for State Agencies

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Brief Overview of Digital Records Storage

Electronic records require constant care to ensure that the data they contain is preserved. A good digital preservation program can help protect records against data decay, obsolescence from ever-changing technologies, hardware failure, and natural or human disaster.

The North Carolina Digital Repository, jointly managed by the State Archives and State Library, provides digital preservation and long-term storage for electronic records and publications with enduring historical value. The records kept in the Digital Repository are state and local government records scheduled for permanent retention in the custody of the State Archives as well as permanent state agency publications managed by the State Library.

Each agency has a program records retention and disposition schedule. Records created and managed by an agency should be addressed in your agency's schedule. Records that have historical value should have a disposition instruction to transfer to the State Archives.

This guide is intended to assist State Agencies with the transfer of electronic records to the State Archives, in keeping with agency's approved records schedule. It provides an overview of best practices for preparing electronic records including the most appropriate file names and formats. This document also provides instruction about the tools used for file transfer and the steps that should be taken to ensure a smooth transfer process.

More information about the State Archives electronic records policies can be accessed here: (Link to "Electronic Records/ Data Transfer to the State Archives of North Carolina" pdf)

General Guidelines around File Management and Transfer

Preferred File Formats for Transfer

The State Archives has guidelines on file formats recommended for records transfer. These preferred formats have been selected because they are sustainable for future use, they are widely supported for access and functionality, and they can support a variety of uses and needs.¹ These formats are considered the best suited for preserving data through future technological changes.

These guidelines can be accessed at:

http://www.ncdcr.gov/Portals/26/PDF/guidelines/file_formats_transfer_requirements.pdf

Converting File Formats

File formats may need to be changed from their original forms to match the preferred format guidelines. Instructions for how to change file formats can be found at: [Guidelines for Changing File Formats](#)

Frequency of File Transfer

A regular schedule for transfers of digital records is important to ensure the data they contain remains accessible. Preservation actions performed by the State Archives ensure that files are authentic and remain accessible well into the future. At a minimum, it is recommended that transfers are scheduled on an annual basis.

For information on scheduling electronic records, contact your agency's Records Analyst or see the [Scheduling Guide for State Agency Records Liaisons](#).

¹ http://www.digitalpreservation.gov/formats/intro/format_eval_rel.shtml#factors

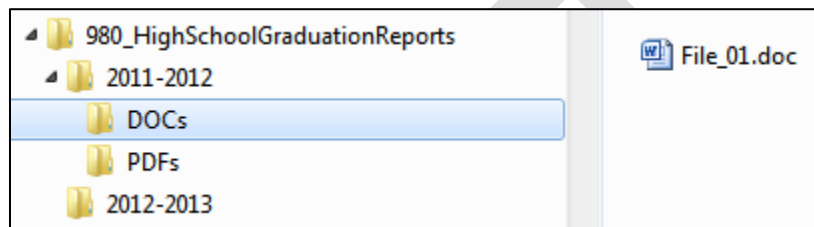
Creating a “For Archives” Folder

It is not necessary to transfer all your digital files or every draft of a single file. Instead, records custodians should create a “For Archives” folder on a shared drive and move the final copy of the records scheduled for transfer to the “For Archives” folder. The State Archives will not take drafts or additional copies of records. SANC prefers that this folder be further organized into sub-folders with the item number serving as the folder name. If you are having difficulty with the item number, please contact your Chief Records Officer.

Organizing Records For Transfer

When copying your records into the “For Archives” folder, organize them using the following directory structure.

- **Item number from your schedule-Year-Document Type-File**
- **For example:**



Electronic files need to be named accurately and consistently so that they are identifiable and accessible. This practice is necessary for administrative use, public access and maintaining confidentiality. A good file name should include consistently formatted dates, all necessary descriptive information and the version of the file. See our instructions on good-file naming practices:

<http://www.ncdcr.gov/Portals/26/PDF/guidelines/filenaming.pdf>

For assistance from your Records Management Analyst, please see the [directory](#) of Records Management Analysts.

Steps for Transferring Electronic Records to the State Archives

Requesting Electronic Records Transfer

Please contact your agency’s analyst before beginning the transfer process. If confidential data exists in the transfer, agencies should inform the analysts and specify the data.

[Electronic Records Transfer Request Form](#)

Regulations for Digital File Transfer

The [Administrative Code](#) includes information on transferring electronic records.

1. Records should be accessible (i.e., able to be opened) prior to transfer.
2. The custodian will create a checksum for each file transferred using a DCR-approved hash algorithm and include this information with the transfer (accomplished by using Bagger).
3. The custodian of the electronic records must check them for computer viruses.

4. The files' metadata shall also be included in the transfer.²
5. Transfer of records should be accompanied by the index information set out in [G.S. §132.6.1](#)

Using Bagger for Electronic Records Transfer

Bagger is a data transfer tool developed by the Library of Congress to verify the integrity of electronic records after they have been transferred. The Bagger tool packages files into a single directory and creates a manifest of unique identifiers (called "checksums") for each file, which are used to validate their integrity, that is, confirm that the files are bit-for-bit unchanged by the transfer.

The State Archives uses Bagger for the transfer of electronic records. The Bagger tool creates a "bag" that contains the manifest of unique identifiers, and a subdirectory containing the actual files and data. Bagger must be used prior to file transfer so that the files may be validated after they have been transferred, as required by **07 NCAC 04M.0503**. It is important to remember that if the files are not bagged before transfer, the State Archives cannot provide any proof as to the integrity of the files. Using Bagger will ensure that the records were transferred completely and accurately.

More information about data transfer policies can be found at (link to "Transfer Procedures for Digital Materials and Electronic Records using the Bagger Data Transfer tool to the State Archives of North Carolina").

The State Archives can load you flashdrives with Bagger already configured or you may choose to download and configure Bagger on your machine prior to transfer.

For step-by-step instructions about installing and using Bagger, please see our [Bagger user guide](#).

- **Bagger User Guide:** http://www.ncdcr.gov/Portals/26/PDF/guidelines/Using_Bagger.pdf
- **Bagger Tutorial Video:**

Using the Bagger Tool to Package Files for Transfer

If agencies have packaged files using the Bagger tool themselves, they should place the bagged files on an external or flash drive to be mailed or delivered to the State Archives. The bagged files may also be transferred using filenet. If the information has not been bagged, the State Archives reserves the right to use the Bagger tool to validate the files following transfer. Data can be corrupted at any point during the transfer process and revalidating the files will ensure a complete, accurate and authentic transfer.

The Electronic Records Transfer Policy states that the State Archives also reserves the right to require the use of data transfer and verification tools in the case of records that³

1. Affect multiple people, without regard to relation.
2. Have been found to have significance over a long period of time.

² Metadata includes complete and intact email header information, sidecar metadata (any other files containing information about the file), spreadsheets or databases used to track a project or file and any information created by geolocation data or an image editing program. For more information on metadata see: http://www.ncdcr.gov/Portals/26/PDF/guidelines/Metadata_Guidelines.pdf.

³ Transfer_policy_final_Electronic_Record_20121127.pdf

3. Document governance
4. Document citizenship
5. Are available for routine public inspection.

Do Not Delete Your Files!

Do not delete local copies of transferred files until you have been contacted by staff from the State Records Center validating transfers and approving the deletion of the copies on your office computers and servers. The [Administrative Code](#) defines electronic records destruction as data and metadata are to be overwritten, deleted and unlinked so that they cannot be reconstructed. For more information about records destruction, please contact the State Archives.

The agency should also retain documentation of the transfer in office permanently as a part of their Records Management File.

References

Last name, First name. Title. Reference style. Cornell University Library. "Cornell University Library Digital Preservation Policy Framework." December 2004. Retrieved 5/11/2011 from:
<http://commondepository.library.cornell.edu/cul-dp-framework.pdf>

Last name, First name. Title. Reference style. Cornell University Library. "Cornell University Library Digital Preservation Policy Framework." December 2004. Retrieved 5/11/2011 from:
<http://commondepository.library.cornell.edu/cul-dp-framework.pdf>

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<http://commondepository.library.cornell.edu/cul-dp-framework.pdf>